

# Work Order ID 51655

August 27, 2009 8:39:52 AM

Page 1

Item ID: D3564-5

Accept

Revision ID: D

Item Name: Wearshoe

Setup Start

Stop

Start Date: 8/27/09 Start Qty: 46.00

Required Date: 9/11/09 Req'd Qty: 46.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

QC:

Date: 08-27 Tooling:

Date: SPC (Y/N):

Date:

Date:

Run Start

Stop

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Draw<br>Number | Draw<br>Rev. | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
|----------|--------------|

|       |       |
|-------|-------|
| D3564 | Rev D |
|-------|-------|

100

0.00



Waterjet

FLOW WATER JET

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3564 Dwg Rev: D Prog Rev: D 12-  
Deburr if necessary

46

RB 9-8-28

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

RB 9-8-28

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

2) 8 02/08/31

46

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 51655

August 27, 2009 8:39:52 AM



Page 2

Item ID: D3564-5

Accept



Setup Start



Revision ID: D

Stop



Item Name: Wearshoe

Start Date: 8/27/09 Start Qty: 46.00



Cust Item ID:

Required Date: 9/11/09 Req'd Qty: 46.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

0.00



Brake NC

NC BRAKE

Memo

0.00

Brake NC

Deburr if necessary. Form on Brake as per Dwg D3564 using Jigs DT8179 and DT8155. Form Joggle as per Dwg D3564 on brake using Jig DT8157

SB 09/09/02 46  
09/09/02

140

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

Ensure joggle as per dwg D3429

⇒ 09/09/02

counts  
46

150

0.00



Powdercoat

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

Memo

0.00

Powder Coating

START TIME: 2:00 pm FINISH TIME: 2:30 pm OVEN TEMPERATURE: 320°F

⇒ 09/09/02

46

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 51655

August 27, 2009 8:39:52 AM

Page 3

Item ID: D3564-5

Revision ID: D

Item Name: Wearshoe

Start Date: 8/27/09

Start Qty: 46.00

Required Date: 9/11/09

Req'd Qty: 46.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC3- Inspect Part Finish

0.00

⇒ 8/27/09

46

QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location

EP-19

0.00

09/09/02 X46

Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00

09/09/03

QC

Memo

0.00

Quality Control

09/09/03

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

August 27, 2009 8:39:51 AM

Page 1

Work Order ID: 51655

Parent Item: D3564-5RevD

Parent Item Name: Wearshoe

Comments:

Start Date: 8/27/09

Required Date: 9/11/09

Start Qty: 46.00

Required Qty: 46.00

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Remaining<br>Qty To Pick | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| M304S16GA                       |                        | Purchased     | No          |                     |                  | 100             | sf                 | 150.0498       | 72.6316                  |               |                |        |



304/316 Sheet .063



18 9-8-09

| <u>Warehouse</u><br><u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-------------------------------------|----------------|-----------------|
|-------------------------------------|----------------|-----------------|

Main Warehouse

MAT

150.0497737

106860

16.018

111924

33.0549737

112290

100.9768

112442

112290 x 23 = 36.3158  
112442 x 23 = 36.3158

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



|  |  |                             |
|--|--|-----------------------------|
| <b>DART AEROSPACE LTD</b>                  |  | <b>Work Order:</b> 51655    |
| <b>Description:</b> Wearshoe               |  | <b>Part Number:</b> D3564-5 |
| <b>Inspection Dwg:</b> D3564 <b>Rev:</b> D |  | <b>Page 1 of 1</b>          |

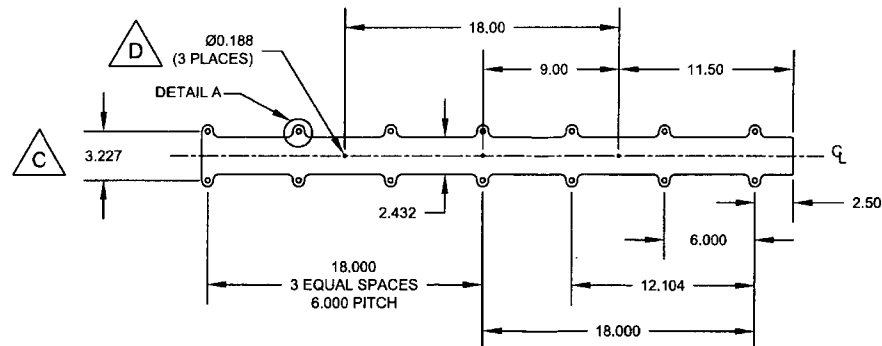
### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

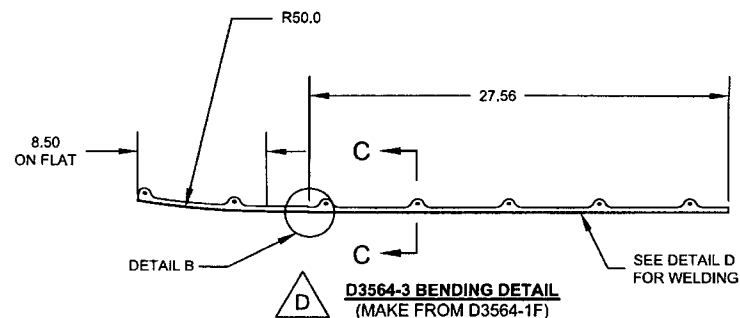
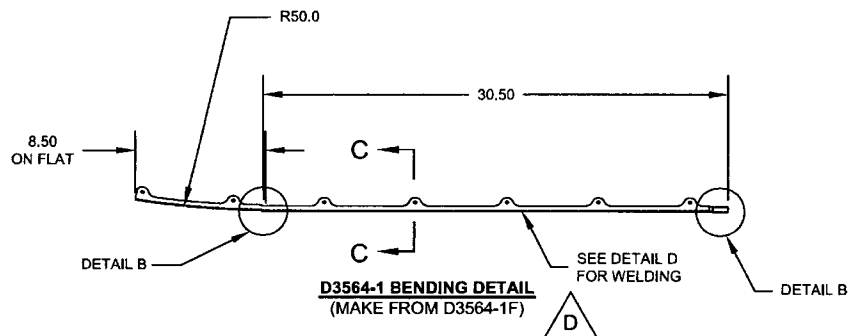
| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| 43.50             | +/-0.030      | 43.50            | X      |        |                      |          |
| 6.75              | +/-0.030      | 6.75             | X      |        |                      |          |
| 10.00             | +/-0.030      | 10.00            | X      |        |                      |          |
| 20.00             | +/-0.030      | 20.00            | X      |        |                      |          |
| 30.00             | +/-0.030      | 30.00            | X      |        |                      |          |
| 2.50              | +/-0.030      | 2.500            | X      |        |                      |          |
| 3.227             | +/-0.010      | 3.229            | X      |        |                      |          |
| 38.500            | +/-0.010      | 38.500           | X      |        |                      |          |
| 5.500             | +/-0.010      | 5.503            | X      |        |                      |          |
| 2.50              | +/-0.030      | 2.500            | X      |        |                      |          |
| 2.432             | +/-0.010      | 2.434            | X      |        |                      |          |
| 0.300 x 0.300     | +/-0.010      | 304 X .300       | X      |        |                      |          |
| Ø0.188            | +0.005/-0.001 | .191             | X      |        |                      |          |
| R0.375            | +/-0.010      | .375             | X      |        |                      |          |
| 0.063             | +/-0.010      | .060             | X      |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |

|                        |                       |                            |     |
|------------------------|-----------------------|----------------------------|-----|
| <b>Measured by:</b> RB | <b>Audited by:</b> S  | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b> 9-8-08    | <b>Date:</b> 09/08/31 | <b>Date:</b>               | N/A |

| Rev | Date     | Change    | Revised by | Approved |
|-----|----------|-----------|------------|----------|
| A   | 08.01.16 | New Issue | KJ/EC/DD   | DS       |



**D3564-1F FLAT PATTERN**



RELEASED

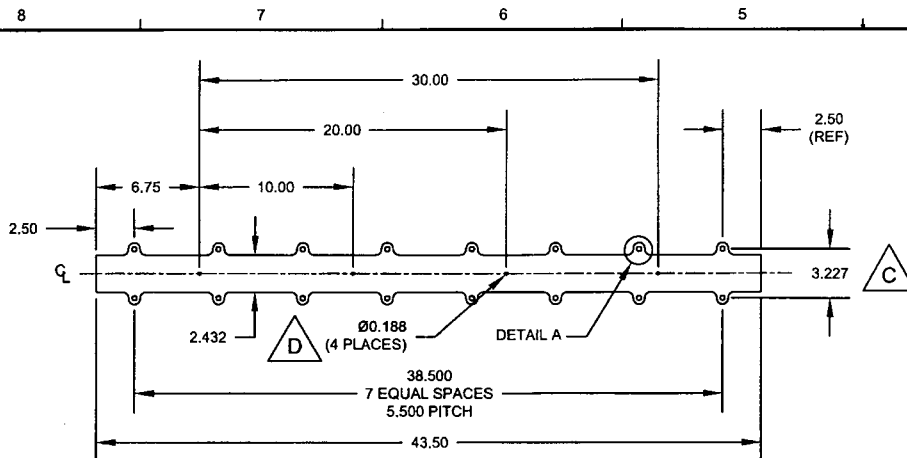
07.09.04

**D3564-1/-3/-5/-7/-9/-11/-13/-15 WEARPLATE NOTES:**

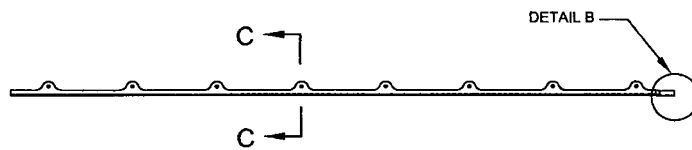
- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 16 GAUGE (0.063 THICK)  
(REF DART MATERIAL SPEC M304S16GA)
- 2) FINISH: POWDER COAT GREY SANTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: SEE TABLE IN ZONE A3
- 8) WELD PER DART QSI 004
- 9) SEE PG 3 FOR SECTIONS AND DETAILS
- 10) PARTS ARE SYMMETRIC ABOUT C

| WEIGHTS: |          |
|----------|----------|
| D3564-1  | 1.85 lbs |
| D3564-3  | 1.85 lbs |
| D3564-5  | 1.93 lbs |
| D3564-7  | 1.26 lbs |
| D3564-9  | 1.85 lbs |
| D3564-11 | 1.85 lbs |
| D3564-13 | 0.38 lbs |
| D3564-15 | 0.80 lbs |

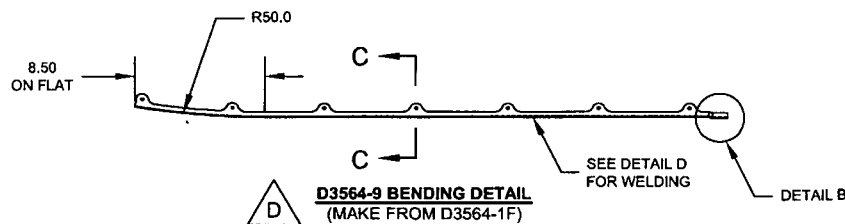
|            |   |   |                   |              |
|------------|---|---|-------------------|--------------|
| D          | UPDATE DRAWING TEMPLATE;<br>CHANGE ALL (TYP X PLS) TO (X PLACES);<br>PG1 A8: UPDATE NOTES;<br>PG1 A8, PG3 B5, C5: ADD D3564-15;<br>PG1 B6, B3: D3564-1/-3 WAS ONE FIGURE;<br>PG2 A7, A3: D3564-9/-11 WAS ONE FIGURE;<br>PG2 A7, A3: D3564-9/-11 WAS ON PG1;<br>PG3 B8, C8: D3564-13 WAS ON PG2;<br>PG3 D2: WELDING DETAIL WAS ON PG1<br>PG3 A5, 7, B2: RELOCATE DETAILS AND SECTION;<br>PG3 A5, 7, B2: INCREASE DETAIL AND SECTION SIZE | CB  | 07.08.21          |              |
| C          | MOVE TAB OUTBOARD, DETAIL A   | PH  | 07.04.17          |              |
| B          | ADD AMS 5513 AND AMS 5524   | PH  | 07.03.20          |              |
| A          | NEW ISSUE   | PH  | 06.12.18          |              |
| REV.       | DESCRIPTION   | BY  | DATE              |              |
| DESIGN     | PH  | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA   |                   |              |
| DRAWN      | CB  |   |                   |              |
| CHECKED    | PH  |   |                   |              |
| MFG. APPR. | PH  |   | DRAWING NO. D3564 | REV. C       |
| APPROVED   | PH  |   | TITLE WEARSHOE    | SHEET 1 OF 3 |
| DE APPR.   | PH  |   | SCALE 1:          |              |
| DATE       | 07.08.21  | COPYRIGHT © 2006 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT IT BEING WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                   |              |



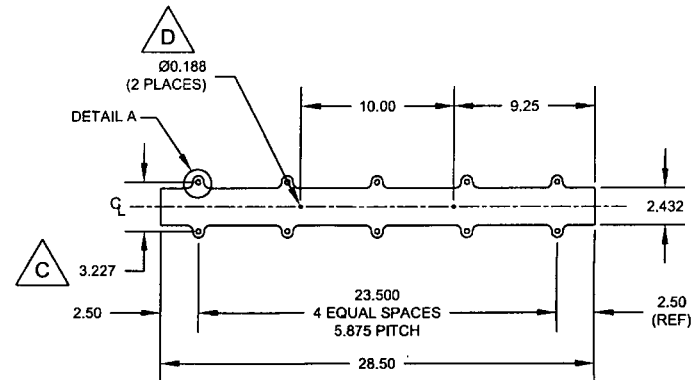
**D3564-5F FLAT PATTERN**



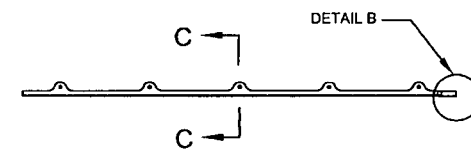
**D3564-5 BENDING DETAIL**  
(MAKE D3564-5 FROM D3564-5F)



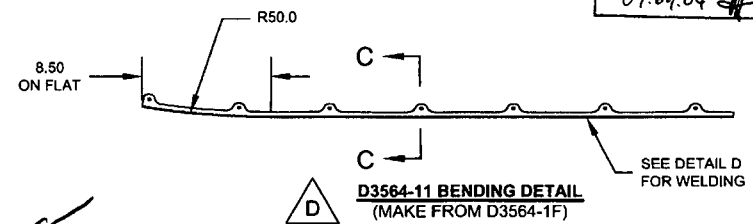
**D3564-9 BENDING DETAIL**  
(MAKE FROM D3564-1F)



**D3564-7F FLAT PATTERN**



**D3564-7 BENDING DETAIL**  
(MAKE D3564-7 FROM D3564-7F)



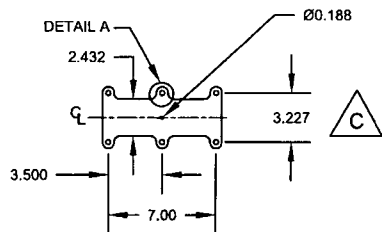
**D3564-11 BENDING DETAIL**  
(MAKE FROM D3564-1F)

RELEASED  
07.09.04

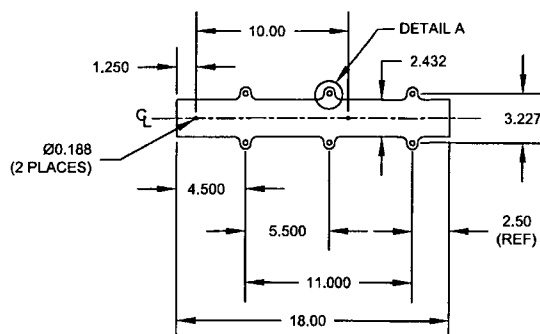
51655

|            |          |  |                     |
|------------|----------|--|---------------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |                     |
| DRAWN      | CB       |  |                     |
| CHECKED    | PH       | DRAWING NO. D3564  | REV. D SHEET 2 OF 3 |
| MFG. APPR. | SH       | TITLE WEARSHOE   | SCALE 1:8           |
| APPROVED   | NO       | <small>COPYRIGHT © 2008 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |                     |
| DE APPR.   | SH       |  |                     |
| DATE       | 07.08.21 |  |                     |

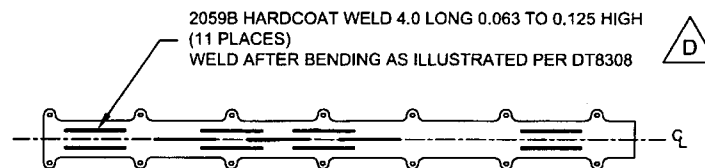
8 7 6 5 4 3 2 1



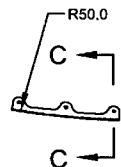
**D3564-13F FLAT PATTERN**



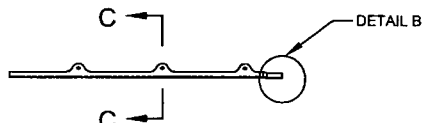
**D3564-15F FLAT PATTERN**



**DETAIL D**  
(D3564-1/-3/-9/-11 WELDING DETAIL)



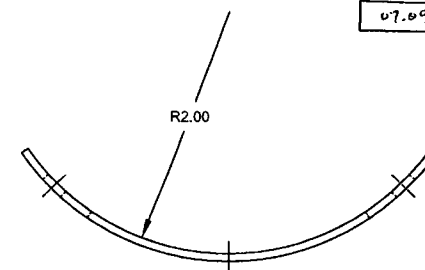
**D3564-13 BENDING DETAIL**  
(MAKE D3564-13 FROM D3564-13F)



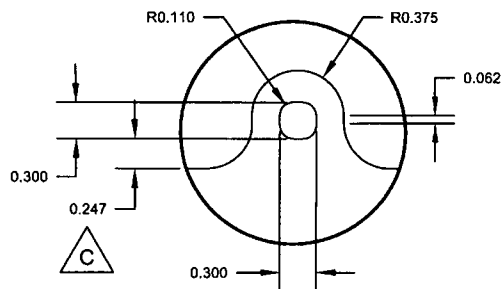
**D3564-15 BENDING DETAIL**  
(MAKE D3564-15 FROM D3564-15F)

**RELEASED**

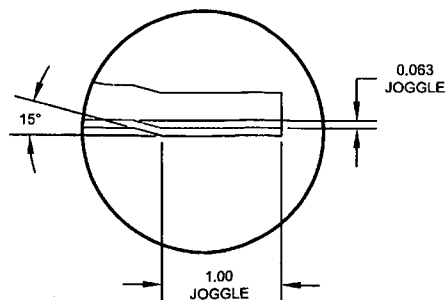
07.09.04



**SECTION C-C**  
SCALE 1:1



**DETAIL A**  
SCALE 1:1



**DETAIL B**  
SCALE 1:1

51655

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      | CB       | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    | PH       | DRAWING NO.  | REV. D       |
| MFG. APPR. | PH       | D3564  | SHEET 3 OF 3 |
| APPROVED   | PH       | TITLE  | SCALE        |
| DE APPR.   | PH       | WEARSHOE   | 1:           |
| DATE       | 07.08.21 | COPYRIGHT © 2006 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

8 7 6 5 4 3 2 1